

the two laterals present varied characters; the third uncinus, counting outward, is usually spatulate; while the remainder are mere bosses, or scales. The wide differences found in the few figures of the dentition of Chitons extant appear to be due to erroneous interpretation of the objects represented. The figures of Lovén are the most satisfactory.

POSTPLIOCENE FOSSILS IN THE COAST RANGE OF CALIFORNIA,

By W. H. DALL.

The National Museum has received from Mr. G. F. Merriam, of San Luis Rey, Cal., specimens of *Donax californicus*, *Chione succincta*, *Olivella biplicata*, and *Cerithidea sacrata*, in a semi-fossilized condition. The first mentioned retained a considerable part of its pinkish interior coloration. These fossils (probably with other species) are stated by Mr. Merriam to be found in great abundance at the head of a cañon in that vicinity, in the heart of the Coast Range, twelve miles from the sea in a direct line, and six hundred feet above tide-water. All the species are found living in abundance on the present sea-coast. This indicates a very recent elevation for this part of the coast, if the facts are correctly interpreted, and further specimens and details will be awaited with interest.

NOTES ON THE AMERICAN SPECIES OF THE GENUS CYBIUM.

By FELIPE POEY.

[Translated by G. BROWN GOODE, from MS. memorandum of Professor FELIPE POEY.]

Cybius caballa, Cuv. & Val.

Cybius caballa, CUVIER & VALENCIENNES, Histoire Naturelle des Poissons, viii, 1831, p. 187.—GÜNTHER, Catalogue of the Acanthopterygian Fishes in the Collection of the British Museum, ii, 1860, p. 373.—POEY, Repertorio Fisico-Natural de la Isla de Cuba, i, 1867, p. 322; ii, p. 13; and in Synopsis Piscium Cubensium, *op. cit.*, ii, p. 362.

Cybius acereum, CUVIER & VALENCIENNES, *loc. cit.*, p. 186 (*nec typus*).

Vulgo:—Sierra.

Differential Characters.—First dorsal with fourteen spines, without a black spot anteriorly. Body immaculate in the adult, spotted with yellowish in the young fish.

The number of teeth increases with the age; in large specimens, it is $\frac{30}{25}$. The larger teeth are placed upon the middle of the jaw, those in the lower jaw being a trifle the longer. The lateral line is very sinuous upon the posterior portion of the body. The eye is larger than in *Cybius regale*.

Bluish upon the back, whitish under the belly. First dorsal white; second dorsal and caudal dusky-bluish (*bleu-noirâtre*); pectorals bluish, as is also the anal, which, however, becomes white at its extremity; ventrals whitish.

In the young fish, under the length of two or three feet, the sides are covered with round, irregular spots, of rather dirty yellow (*jaune un peu sale*).

Cuvier described a specimen which weighed twenty-two pounds; at that size, the fish is still young, and retains its yellow spots.

Those ordinarily taken range in weight from twelve to twenty-five pounds, though they reach the weight of one hundred pounds. I have seen one which measured 285^{mm}.

Cybiium regale, (Bloch) Cuvier.

Scomber regalis, BLOCH, *Naturgeschichte der ausländischen Fische*, taf. 333.

Cybiium regale, CUVIER & VALENCIENNES, *op. cit.*, p. 184.—GÜNTHER, *op. cit.*, p. 372.—POEY, *op. cit.*, i, p. 322; ii, p. 362.

Vulgo:—*Pintada*.

Differential Characters.—The first dorsal has seventeen spines and the spot upon its anterior portion. The lateral bands and spots are persistent through life.

The teeth are $\frac{20}{16}$ in a specimen of moderate size. In the upper jaw, the median teeth are the larger; in the lower, their size is more nearly equal.

The back is bluish, as are also the top of the head, the second dorsal and its finlets, the caudal, and the pectorals. The first dorsal is white, having in front a spot of deep-blue, which is prolonged far back upon the upper edge of the fin. The anal and the ventrals are white. The sides are sky-blue, with silvery lustre; the belly is white, with a bluish tinge. The sides are marked with broken longitudinal bands and round spots; these bands and spots are yellow, more or less golden, and with a reddish tint.

The ordinary size is about twelve pounds, though they sometimes reach the weight of twenty.

Cybiium acervum, Cuv. & Val.

Cybiium acerrum, CUVIER & VALENCIENNES, *op. cit.*, p. 186.

The specimens described by Cuvier were of five pounds weight. He claims to have received specimens from Martinique, from Santo Domingo, and from Cuba, those from the latter place sent by me. I can only say that I have not been able to find this species, and that I have not included it in my manuscript "*Ichthyologie*".

According to Cuvier, it has seventeen spines in the first dorsal, and also the black spot. The body is immaculate, even in the specimens of five pounds weight.

Cybiium maculatum, (Mitchill) Agassiz.

Scomber maculatus, MITCHILL, *Transactions of the Literary and Philosophical Society of New York*, i, 1815, p. 426, pl. vi, fig. 8.

Cybiium maculatum, AGASSIZ, in Spix, *Selecta Genera et Species Piscium*, 1829, p. 103, tab. lx.—CUVIER & VALENCIENNES, *op. cit.*, p. 181.—GÜNTHER, *op. cit.*, p. 372.

The *Cybiium maculatum* of the United States has the teeth somewhat conical and very pointed. It has seventeen dorsal spines and a black spot upon the first dorsal.

Cybium immaculatum, Cuv. & Val.

Cybium immaculatum, CUVIER & VALENCIENNES, *op. cit.*, p. 191.—GÜNTHER, *op. cit.*, p. 370, note 5.

The *Cybium immaculatum* of Cuvier has the body immaculate in specimens only six or seven inches long.

Acanthocybium peto, Poey.

Acanthocybium Petus, POEY, *Memorias sobre la Historia Natural de la Isla de Cuba*, ii, 1860, p. 234, pl. xvi, fig. 1; *Repert.*, ii, p. 363.

Vulgo:—*Peto*.

This genus differs from *Cybium* by its numerous dorsal spines, twenty-five in number. The type taken by Professor Gill has the teeth compressed, triangular. The Cuban species has the points of the teeth rounded. The caudal is very small. The lower jaw has its sides deeply notched and its extremity lower than its lateral edges. In specimens of less than three feet, the body is covered with vertical bands of a vitreous lustre (*glacées*). It grows very large, sometimes attaining the weight of one hundred pounds.

THE CLUPEA TYRANNUS OF LATROBE.

By G. BROWN GOODE.

Mr. Benjamin H. Latrobe, a surveyor of public lands, published, in 1802, a description of a clupeoid fish the affinities of which have never been satisfactorily determined.* Dr. DeKay, misled by the name "alewife", applied the specific name *tyrannus* to the northern species known to him by that popular name (*Pomolobus pseudo-harengus*), a usage which was concurred in by Dr. Storer and M. Valenciennes. In his earlier writings, Professor Gill referred the same name to the shad (*Alosa sapidissima*). Latrobe's paper, and the name therein proposed, have lately been lost sight of; but there is little doubt that they refer to the menhaden, or mossbunker (*Clupea menhaden*, Mitchill, and *Brevoortia menhaden*, Gill). The laws of priority demand that this species shall henceforth be designated *Brevoortia tyrannus*.

The fishes of the Chesapeake and its tributaries have been very little studied until within the past three years, and the habits of the menhaden are so different in these waters and in the north that it does not seem surprising for Northern ichthyologists to have made mistaken identification of Latrobe's specific name.

A few years ago the Capes of Delaware were thought to define the southern range of the menhaden, while its peculiar parasite and its habit of ascending southern rivers were unknown.

*A Drawing and Description of the *Clupea tyrannus* and *Oniscus praeustator*. By Benjamin H. Latrobé, F. A. P. S. <Transactions of the American Philosophical Society held at Philadelphia for promoting useful knowledge, vol. v, 1802, p. 77.